BE/VIII/MECH/Automobile Engg./NOV.12
05/12/12
Mech

21 : 2nd half.12-shilpa(e)

Con. 10019-12 (REVISED COURSE) KR-4896

(3 Hours) [Total Marks : 100

**N.B. :** (1) Question No. **1** is **compulsory**.
(2) Attempt any **four** questions out of the **remaining** questions.
(3) Draw **neat** sketches to Illustrate your **answers**.
(4) **Figures** to the **right** indicate **full** marks.

1. (a) Explain the working of Distributorless Ignition system. **5**
   (b) Describe Radial Ply tyres. **5**
   (c) Explain the process of shifting from 3rd gear to 2nd gear in a constant mesh gear box. **5**
   (d) Explain working of wheel cylinder. **5**

2. (a) Describe any two type of brake shoe arrangements used in drum brakes. **14**
   (b) Explain construction, advantages and disadvantages of three quarter floating axle. **6**

3. (a) For a 5 forward, 1 reverse speed constant mesh gear box :–
      (i) Draw the layout **7**
      (ii) Explain the working with advantages and disadvantages. **7**
   (b) Explain the construction, working and application of overdrive. **6**

4. (a) What are the requirements of steering ? Explain Re-circulating Ball type steering. **10**
   (b) Explain construction and working of Air Brakes. **10**

5. (a) With neat sketch explain the construction, working, advantages and disadvantages of multiplate dry friction clutch. **10**
   (b) Define the following terms w.r.t. steering geometry :– **10**
      (i) Castor
      (ii) Camber
      (iii) Toe
      (iv) King Pin Inclination
      (v) Combined Angle.

6. (a) Describe construction and working of Wisbone suspension system. Also explain objects of suspension. **10**
   (b) Explain the circuit diagram of combined current and voltage Regulator. Describe its working in detail. **10**

7. Write a short notes on (any **four**) :– **20**
   (a) Torsion Bar
   (b) Materials for Body Construction
   (c) Cutout Relay
   (d) Telescopic Shock Absorber
   (e) Freewheel Unit
   (f) Fluid Flywheel.

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